

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): J. HIRAI, et al  
Serial No.: (not yet assigned)  
Filed: December 12, 2003  
For: COMPENSATION NUMERICALLY CONTROLLED CURVED  
SURFACE MACHINING UNIT

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR 1.97 & 1.98**

Mail Stop DD  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

December 12, 2003

Sir:

In the matter of the above-identified application, applicant(s) is/are submitting herewith a copy of the documents listed in the attached form equivalent to Form PTO-1449 for the Examiner's consideration.

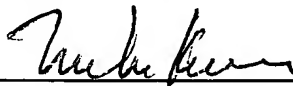
This information disclosure statement is being submitted within the accompanying utility application papers.

To the extent that, the documents listed on the attached form equivalent to Form PTO-1449, are not in the English language, the requirement of 37 CFR 1.98(a)(3) for a concise explanation of the relevance is satisfied by an English language abstract.

It is respectfully requested that this information disclosure statement be considered by the Examiner.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (503.39668PX2) and please credit any excess fees to such deposit account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Melvin Kraus', is written over a horizontal line.

Melvin Kraus  
Registration No. 22,466  
ANTONELLI, TERRY, STOUT & KRAUS, LLP

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Form PTO-1449  
Equivalent

U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No. 503.39668PX2  
Serial No. (not yet assigned)  
Applicant: HIRAI, et al  
Filing Date: December 12, 2003  
Group:

U.S. Patent Documents

| Examiner<br>Initials | Document<br>No. | Date  | Name             | Class Subclass | Filing Date<br>If Approp. |
|----------------------|-----------------|-------|------------------|----------------|---------------------------|
|                      | 5,282,143       | 1/94  | Shirai           |                |                           |
|                      | 5,726,896       | 3/98  | Jia et al        |                |                           |
|                      | 5,808,263       | 9/98  | Beltrami         |                |                           |
|                      | 5,815,401       | 9/98  | Otsuki et al     |                |                           |
|                      | 5,936,864       | 8/99  | Otsuki et al     |                |                           |
|                      | 5,955,856       | 9/99  | Sato et al       |                |                           |
|                      | 5,994,863       | 11/99 | Fujita           |                |                           |
|                      | 6,268,871       | 7/01  | Rice et al       |                |                           |
|                      | 6,311,098       | 10/01 | Higasayama et al |                |                           |

Foreign Patent Documents

| Document<br>No. | Date | Country       | Class Subclass | Translation<br>Yes No |
|-----------------|------|---------------|----------------|-----------------------|
| 0 706 103 A1    | 9/95 | European      |                |                       |
| 9-114512        | 5/97 | Japan         |                |                       |
| 2 341 243 A     | 3/00 | Great Britain |                |                       |

Other Documents (including Author, Title, Date, Pertinent Pages, etc.)

"On Nurbs : A Survey", L. Piegl, IEEE Computer Graphics and Applications, IEEE Inc. New York, US, Vol. 11, NR, pps. 55-71

"Integer Subdivision Algorithm for Rendering Nurbs Curves", N. Anantakrishinan et al, Visual Computer, Springer, Berlin, DE, Vol. 8, NR. 3, pps. 149-161

Mold Engineering Issued July 1998, pps. 8-9

Machine & Tools Issued February 1998, pps. 12-17

The Nurbs Book by L. Piegl, et al

Examiner

Date Considered

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609;  
Draw line through citation if not in conformance and not considered. Include copy of this form with next  
communication to applicant.

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|----------------------|-----------------|------|------|----------------|---------------------------|
|----------------------|-----------------|------|------|----------------|---------------------------|

Foreign Patent Documents

| Document<br>No. | Date  | Country | Class Subclass | Translation<br>Yes No |
|-----------------|-------|---------|----------------|-----------------------|
| 7-334223        | 12/95 | Japan   |                | (abstract)            |
| 2001-092516     | 4/01  | Japan   |                | (abstract)            |

Other Documents (including Author, Title, Date, Pertinent Pages, etc.)

Examiner

Date Considered

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Draw line through citation if not in conformance and not considered. Include copy of this form with next  
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